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An Evaluation of the Effectiveness of the Cooperatives Serving Our Community Instructional Unit as Perceived by Nebraska Vocational Agriculture Instructors

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AN EVALUATION OF THE EFFECTIVENESS OF THE COOPERATIVES--SERVING OUR COMMUNITY INSTRUCTIONAL UNIT AS PERCEIVED BY NEBRASKA VOCATIONAL AGRICULTURE INSTRUCTORS

by

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AN EVALUATION OF THE EFFECTIVENESS OF THE

COOPERATIVES--SERVING OUR COMMUNITY INSTRUCTIONAL UNIT

AS PERCEIVED BY NEBRASKA VOCATIONAL AGRICULTURE INSTRUCTORS

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Purpose. The primary purpose of this study was to assess the perceptions of Nebraska vocational agriculture instructors with regard to the Cooperatives--Serving Our Community instructional unit.

Method. A mailed questionnaire procedure was used to obtain information from 108 of the possible 127 Nebraska vocational agriculture instructors. A total of 78 observations were valid. The dependent variables were instructors' perceptions of instructional unit quality, value, and inservice training. Independent variables included Nebraska Vocational Agriculture Association districts, years of experience as a vocational agriculture instructor, total number of students enrolled in local vocational agriculture programs, instructional unit use-rate and participation mode at District Inservice Workshops. The Multivariate and Univariate Tests of Significance were used to determine which variable(s) exhibited significance. The Tukey-HSD procedure was used when necessary to determine whether the subgroups means differed significantly from one another.

Findings. Major findings of this study included that as instructors' perceptions of instructional unit quality increased, the hours of instructional unit use increased. Further, if a local

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INTRODUCTION OF THE STUDY

Vocational Education Faces 40 Percent Cut in Funds, State Education Funds Shrink, Vocational Education Enrollments Decline, School Board Says No to Vocational Education Requests . . . Headlines such as these have recently appeared in newspapers, magazines and professional journals evidencing the decreasing resources available to vocational educators. Nonetheless, Tyler (1982) contends that "declining school enrollments do not mean a deterioration of vocational education programs. It is a mistake to associate population changes with the 'goodness' of our vocational education programs."

Tyler (1982) further explained that periods of fiscal recession, historically, have been times of improvement in education. Indicatively, Congress established the land grant colleges in 1862 during the Civil War and much of the progressive education movement grew out of the Great Depression of the 1930's. "Now that vocational education has overcome the growing pains resulting from the Vocational Education Act of 1963 and its subsequent amendments, perhaps now is the time to give a long hard look at opportunities in vocational education" (idem.).

Forsythe (1983) believes that there are many resources that vocational education has yet to take into consideration. If vocational educators are to educate students in an effort to prepare them for entry and advancement in the occupations for which they have been trained, then it becomes important to utilize all resources available. Davis and Golden (1982) advocate the logic of utilizing the resources of the

vocational educators cohorts in business and industry, as "business and industry are always one step ahead of education."

A localized example of this combined effort between business, industry and vocational education was the recent development and introduction of an instructional unit on agribusiness which focuses on the cooperative method of business. This unit was developed by the Nebraska Cooperative Council, a statewide trade association for agricultural cooperatives, the Departments of Agricultural Education and Agricultural Economics in the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln and the Nebraska Vocational Agriculture Association. Entitled Cooperatives--Serving Our Community (Davis et al., 1983), this instructional unit was designed for utilization by local Nebraska vocational agriculture instructors.

Statement of the Problem

The central problem of concern for this investigation was to assess the perceptions of Nebraska vocational agriculture instructors with respect to the Cooperatives--Serving Our Community instructional unit.

Purpose of the Study

It is the purpose of this study to assess the perceptions of Nebraska vocational agriculture instructors with regard to the Cooperatives--Serving Our Community instructional unit. Specific objectives are as follows:

1. To determine perceptions of the instructional unit quality as determined by selected demographic variables.

2. To determine perceptions of the instructional unit value as determined by selected demographic variables.

3. To determine perceptions of the instructional unit inservice training as determined by selected demographic variables.

4. To determine if a significant correlation exists between the perceptions of quality, value and inservice training.

Significance of the Study

Over the past half century, agricultural cooperatives have provided a very successful business system that uniquely met the needs of farmers/ranchers and the agricultural industry. Perhaps due to the emphasis on growth and meeting members' needs, cooperative education was too frequently neglected.

Funding for education in cooperatives is often cut back or disbanded entirely to maintain higher priority short-term objectives. In financial issues, cooperatives pay careful attention to the need for setting up reserves to take care of depreciation of fiscal assets, but often nothing to provide for depreciation of another kind . . . human capabilities. Abrahamsen (1976) states that "Cooperatives are confronted by a passing parade of many different publics. Most of these publics have either a direct or indirect interest in how cooperatives operate . . . they must know how and why cooperatives were organized." Groves echoes the concern when he wrote "Cooperatives in Northern Europe have a common saying that 'a cooperative without an education program will last for a generation and a half.' For many American cooperatives the last half generation is already here" (Groves, 1971). Therefore,

this renewal process requires new dedication to a formal program of cooperative education.

In response to the challenge of checking the eroding educational role of cooperatives, the Nebraska Cooperative Council in conjunction with the Departments of Agricultural Education and Agricultural Economics in the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln and the Nebraska Vocational Agriculture Association-Agribusiness Relations Committee coordinated, developed and implemented a standardized unit of instruction on basic agribusiness with a focus on the cooperative method of business. This instructional unit entitled Cooperatives--Serving Our Community was provided to all 135 Nebraska vocational agriculture departments in the Fall of 1983.

Purpose of Instructional Unit

The purpose of the instructional unit was to assist students of vocational agriculture to better understand the role of cooperatives in the business world. Additionally, emphasis was placed on cooperatives' impact as an economic force in agriculture, their benefits to members and employees, as well as the community, state and nation.

The objectives of the instructional unit were:

1. To provide and encourage implementation of a standardized instructional unit on cooperative business organizations throughout Nebraska vocational agriculture departments as an alternative to traditional teaching methods.

2. To promote cooperation between the local cooperative business and the vocational agriculture departments in educating students about the cooperative business method.

3. To prepare instructors of vocational agriculture and administrators of local cooperative businesses in utilizing the instructional unit.

Development of Instructional Unit

The instructional unit was designed to be easily included and adapted into the curricula utilized by local Nebraska vocational agriculture instructors. Therefore, it was modeled in terms of student performance using measurable objectives utilized in the development of the Nebraska Vocational Agriculture Core Curriculum (Blezek et al., 1977) and the Nebraska Vocational Agribusiness Curriculum for City Schools (Blezek et al., 1980). A major reference was the Pennsylvania State University cooperative unit, Cooperatives Serving Our Community (Doran et al., 1980).

A brief introduction of the instructional unit was presented to the Nebraska Vocational Agriculture Association during their Annual Summer Conference July 14, 1983 in Kearney, Nebraska. A complimentary breakfast was provided for all vocational agriculture instructors in attendance. The primary objective was to familiarize the instructors with the Nebraska Cooperative Council and encourage their participation in the District Inservice Workshops scheduled for that fall.

Instructional Unit Distribution/Inservice Workshops

To accomplish the objectives and purpose of this project, it was important that instructors of vocational agriculture be provided inservice training to familiarize them with, and inspire utilization of, the instructional unit. The importance of both content and delivery of

the instructional unit was stressed through inservice training. Accordingly, each local cooperative business was encouraged to become involved and to invite the local vocational agriculture instructor(s) in their trade territory to attend a dinner meeting workshop as their guests. These workshops provided for the distribution of the instructional unit, familiarization with content, instructional unit organization and possible methods of instruction. Further, the workshops emphasized the importance of approaching cooperative education through a team effort involving local cooperative personnel and vocational agriculture instructors.

The instructional unit was distributed during September and October of 1983. During that period there were 135 secondary vocational agriculture programs in Nebraska (128 of these departments remain in existence). For administrative purposes, the Nebraska Vocational Agriculture Association was divided into ten districts. The first eight districts (I-VIII) included the secondary vocational agriculture instructors (see Figure 1). The remaining two districts (IX and X) were composed of post-secondary vocational agriculture instructors, teacher educators of Agricultural Education and staff of the Nebraska Department of Education, Division of Vocational Education. To accommodate geographic similarities, separate inservice meetings were conducted in a central location within each of the eight secondary districts. All post-secondary instructors, State Department staff and teacher educators of Vocational Agriculture Education were invited to attend one or more of the District Inservice Workshops.

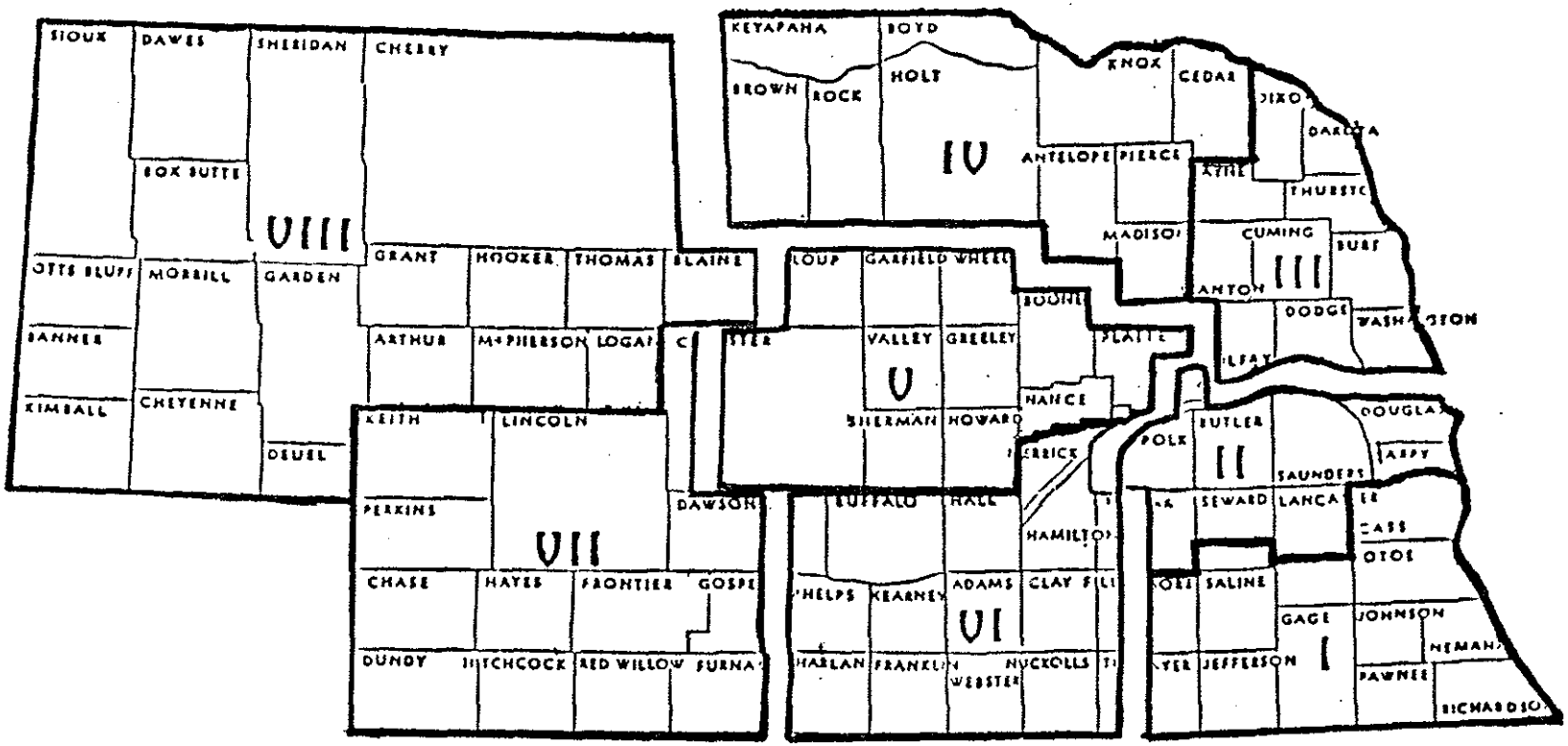

Figure 1. Geographical boundaries of Nebraska Vocational Agriculture Association districts (January, 1983).

District Inservice Workshops. The objectives of the inservice training included:

1. Introduction to the need for cooperative education.

2. Familiarization with the Cooperatives--Serving Our Community instructional unit.

3. Evening meal interaction between cooperative representatives, vocational agriculture instructors, State Department staff and teacher educators of Agriculture Education.

4. Application of materials through a team approach.

In addition, the local cooperatives committed long-term financial resources to provide the student manuals needed by the local vocational agriculture departments in their trade area on an annual basis.

Summary

In total, 122 of the 135 vocational agriculture departments, 105 local supply and marketing cooperative representatives, 20 Production Credit Associations and Federal Land Bank Association representatives and five guests were in attendance at the eight District Inservice Workshops (see Appendix A). Upon conclusion of the series, the researcher provided the instructional unit and individualized usage instructions to the 13 instructors of the vocational agriculture departments not represented at the inservice workshops.

Although the Cooperatives--Serving Our Community instructional unit had been developed and inservice provided, a determination had not been made regarding the current utilization of the instructional unit by instructors of vocational agriculture. Over two and one-half years have elapsed in order for vocational agriculture instructors to acquaint

themselves with the instructional unit and integrate it into their local curriculum. Therefore, the need for research to assess the perceptions of Nebraska vocational agriculture instructors with regard to the Cooperatives--Serving Our Community instructional unit was necessary.

Definition of Terms

For clarification purposes, specific terms are defined in this section which apply to this investigation.

Agricultural cooperatives. A business entity designed to supply and/or market products, or provide services, to its agricultural producer/owner/user members.

District Inservice Workshops. A series of dinner/meeting workshops conducted in each of the eight secondary Nebraska Vocational Agriculture Association districts to provide inservice training to instructors of vocational agriculture. Each local cooperative business was encouraged to become involved by inviting the local vocational agriculture instructor(s) in their trade area to attend as their guests.

Inservice training. The information and instruction provided to vocational agriculture instructors at each District Inservice Workshop to familiarize them with, and inspire utilization of, the instructional unit.

Instructional unit. A standardized unit of instruction on basic agribusiness entitled Cooperatives--Serving Our Community. Particular emphasis of the instructional unit is focused on the cooperative business method and includes the complete Teachers Guide, References and Student Manual.

Instructional unit quality. The characteristics or attributes of the instructional unit as perceived by the vocational agriculture instructors as evidenced by their response to the instrument designed for this measurement.

Instructional unit use-rate. A measure of instructors' utilization of the instructional unit, Cooperatives--Serving Our Community, expressed in hours.

Instructional unit value. The relative merit or usefulness of the instructional unit to the vocational agriculture instructors as identified by their response to the instrument designed for this measurement.

Listwise deletion. A specific element of the Statistical Package for the Social Sciences (Release 2) which would only allow data received from totally completed questionnaires to be used for analysis.

Nebraska Vocational Agriculture Association. The professional association for the improvement and advancement of vocational agriculture instructors.

Nebraska Vocational Agriculture Association district. The 1983-84 distribution of secondary vocational agriculture departments based upon the eight geographical areas across Nebraska.

Participation mode. The manner of participation, attendance, or lack of attendance, at District Inservice Workshops by instructors of vocational agriculture and cooperative representatives.

Treatment instrument. The term "treatment instrument" in this investigation refers to the Cooperatives--Serving Our Community instructional unit.

Vocational agriculture. The term vocational agriculture in this investigation refers to any secondary (grades 9, 10, 11 or 12) vocational agriculture program conducted for youth or adults which has been approved for reimbursement through state and federal funds by the Nebraska State Department of Vocational Education.

Limitations of the Study

This study was limited to the vocational agriculture instructors responsible for agribusiness instruction, who were employed at the secondary level in Nebraska public schools, during the 1985-86 school year. The study did not include one vocational agriculture department which was not in existence when the Cooperatives--Serving Our Community instructional unit was distributed. Additionally, only one response was submitted jointly for two vocational agriculture departments which both employed the same instructor on a part-time basis. The basis for identification of instructors was the Agriculture Teachers Directory (Henry, 1983).

Organization of the Chapters

This chapter, Chapter I, is designed to present the reader with the purpose, need and importance of the study. Chapter II reviews previously written literature that was available to the investigator. Chapter III describes those procedures utilized in the design and completion of this study. Chapter IV reports and interprets the findings of the data. Chapter V summarizes the study, states conclusions and provides recommendations.

CHAPTER II

REVIEW OF LITERATURE

The National Advisory Committee on Vocational Education reported to the President in 1968 that "Nothing will henceforth be more constant than change" (Matteson, 1974). A review of literature revealed that the components and elements of vocational agriculture education is no exception to that statement. Dramatic changes in vocational agriculture education have evolved during the past century. Of major legislative significance was the Smith-Hughes Vocational Education Act of 1917, the Vocational Education Act of 1963, and the subsequent 1968 amendments.

Smith-Hughes Vocational Education Act

True (1929) wrote that "The passage of the Smith-Hughes Vocational Education Act practically created a system of vocational education of broad scope as a permanent part of the public school organization throughout the United States." The Act itself provided federal funds for immediate extension of the states efforts and helped to put vocational education on a sound and substantial footing within a few years. "It would then remain for the States and local committees, with or without additional Federal assistance, to increase the strength and scope of vocational education to meet the development of the various local vocations" (idem.).

Vocational Education Act of 1963

Worthington (1974) and Mayer (1980) have noted legislative mandates, in the Vocational Education Act of 1963 and in the amendments in

1968, which shifted the purpose of vocational agriculture from just a production agriculture program to one serving all agricultural occupations. McClay (1978) indicated that,

> The 1963 Act encouraged schools to offer vocational instruction for any occupation in agriculture/agribusiness where there was a need. This was a drastic change from the types of programs--those only in production agriculture or farming--receiving federal financial support prior to 1963.

This legislation recognized and provided for the reorganization of vocational agriculture education into seven taxonomy areas including: Production Agriculture; Agricultural Supplies and Services; Agricultural Mechanics; Agricultural Products Processing and Marketing; Horticulture; Renewable Natural Resources; and Forestry (idem.).

Hence, vocational agriculture at the secondary school level has changed dramatically. These changes can be found in the clientele presently being served, the curriculum being offered, the number of schools with multiple teacher departments and the demands of the labor market (Matteson, 1974).

Effect Upon Curriculum

Marvin (1980) reported that the pre-1963 production-oriented courses were outdated and too rigid to adequately meet the changing needs of students enrolling in vocational agriculture classes. These findings substantiated those of Faulkner (1970) and Thomas (1971) who advocated innovative programs to meet the manpower needs in industry. Horner and Zikmund (1970) found that vocational agriculture programs should be structured to provide any interested student with essential knowledge and skills necessary to attain gainful employment in any agricultural occupation in which there is a need or interest. In

actuality, this mandated expansion (Vocational Education Act of 1963) of vocational agriculture curriculum has left instructors grasping for quality instructional materials in an era of rapid technological change (Geesey, 1976). In efforts to adjust to those needs, Pepple (1982) reported that the recent propensity of high school vocational agriculture instructors has been toward a free elective system in course structure.

Vocational agriculture instructors became obligated to provide instruction which would meet the needs of all students in a balanced program and could involve an occupation in any of the seven agricultural taxonomy areas. Often the approach used to address these needs was to increase the number of courses offered. Therefore, some teachers provided a multiple of semester courses which had little sequential order (Pepple, 1982). The results had a "shotgun" effect with little progress being made toward adequate training for employment in a student's occupational choice. Boyer (1978) referred to the situation as "a kind of curriculum cafeteria."

Marvin (1980) expressed concern with this approach in that "The basic (agriculture) program has . . . given way to the more flexible curricula which are now so flexible as to be considered by some to be disorganized or nondirectional." Pruitt (1980) suggested that this situation was not providing the best learning experiences for those students enrolled in vocational agriculture. He further wrote that when students graduate, they have not received an adequate vocational education necessary for entry-level employment in their chosen field.

Matteson (1974) stressed,

> The development of curriculum which prepared students to enter into the occupations of their choices is a major reason for the existence of vocational educators at all levels . . . . The secondary and post-secondary vocational educators are ultimately the ones responsible for the development of appropriate and adequate vocational educational curriculum.

In striving to provide that type of instruction, Blezek and Dillon (1980) reported that, "One of the most critical concerns confronting instructors of vocational agriculture has been that of deciding what to teach and how to organize course content."

Importance of Agribusiness Instruction

Pepple (1982) expressed that "Students were looking for jobs in nonfarm, agricultural industries (agribusiness), and in most cases, they lacked adequate training and knowledge to perform competently in these occupations." To reinforce his findings Pepple cited the fact that production agriculture (farming) is in decreasing demand when looking at future manpower needs in agriculture. In light of the interdependence of agriculture upon agribusiness, Rawlins (1980) emphasized the grave importance of agribusiness instruction in educational classrooms.

Blezek et al. (1980) adapted the Nebraska Vocational Agriculture Core Curriculum to the urban setting. Special emphasis was placed on agribusiness instruction and skill development. However, as many vocational agriculture instructors in the field strived to integrate agribusiness education, the basic principles of the American business enterprise system were often neglected in classroom instruction.

Need for Cooperative Education

John F. Kennedy addressed the importance of the cooperative method of business as follows (Abrahamsen, 1976):

> Cooperative and mutual business has been a very important and constructive part of our free economy ever since Benjamin Franklin organized the first mutual insurance company in Philadelphia in 1752. It is one of the finest expressions of the American spirit. Here groups of people, faced with common needs, invest their capital and organize their own cooperatives to meet these needs. This is self help at its best.

Yet this important segment of the free enterprise system---the cooperative method of business---has been perceived as being overlooked by vocational agriculture education. Schomisch (1979), Cooperative Education Specialist, University Center for Cooperatives and Torgerson, then Deputy Administrator for Cooperatives, USDA, reported in 1978 that "The gap between cooperative educational need and opportunity came to light in a study requested by regional cooperative leaders who perceived a de-emphasis in cooperative education in recent years." The study showed a combination of circumstances restricted students' opportunities to learn about cooperatives as cooperative courses are few in number and frequency.

The importance of cooperatives is quite evident as the life of every American is touched at some time or other by cooperative enterprise (Kirkman, 1978). Abrahamsen (1976) gave reference to Kirkman's findings when he explained that cooperative enterprise covers a wide range of activities.

> It has application, for example, to farmers joining together to sell their crops and livestock, to buy their production supplies, and to obtain the services they need to carry on their farm operations. Cooperatives are also organized by consumers to help them buy items they use in their day-to-day living. Farmers and business owners may even insure their

> property in cooperative fire insurance companies. Similarly, they may be members of cooperative life insurance companies. More and more people in general are turning to the cooperative technique to provide health services; and grocers, hardware dealers, and others have organized cooperative wholesale associations to purchase the products they sell at retail. People may put their savings in mutual cooperative savings banks and may use cooperative credit unions both as savings institutions and as places to get loans.
>
> These are but a few of the many forms of business enterprise that cooperatives may take. They can, in fact, be organized to meet any legitimate need.

Thomas Ellerbe (1978), President of the Cooperative Foundation and Executive Vice President of the Foundation for Agricultural Cooperation, illustrated the importance of cooperatives to just one segment of the economy--agriculture. Ellerbe (ibid.) stressed that "Certainly, if any group needs the opportunity to help itself toward economic justice, the American farmer does." Latest research reinforces Ellerbe's thoughts as it shows that four of five farmers are members of at least one cooperative (Richardson, 1983).

Focus on Youth

Torgerson (1980) explained, "Benefits of cooperation so obvious to first and second generation cooperators often can be lost among the third and fourth generations who have not experienced the tribulations and rewards of the early organizers." Kraenzle et al. (1982), of the Agriculture Cooperative Service, echoed Torgerson's concern when he stated:

> Many young and middle aged farmers began farming in areas where cooperatives were established by their forebears. Most of these farmers did not experience an environment without cooperatives and may not understand the political, economic or philosophical realization that lead to their formation.

Schomisch (1980) illustrated the severity of the void of formal cooperative education within the curriculum when citing, ". . . a 1977 technical assistance study in the Upper Midwest which showed that deficiencies were making it difficult for students to learn about cooperatives." Such recognition has renewed efforts to stimulate an increase in all levels of the nation's school system (Torgerson, 1983). Thomas L. Stuart, Executive Secretary of the Virginia Council of Farmer Cooperatives, spoke to the importance of including cooperative education in secondary school curricula when he voiced, "Youth is our number one priority . . . because it is an investment in the future of cooperatives and agriculture" (Kirkpatrick, 1979).

Need for Inclusion in Vocational Agriculture

Agricultural cooperatives have a long and close relationship with vocational agriculture. The Smith-Lever Act, passed in 1914, provided for the cooperative extension system of the U.S. Department of Agriculture and the state agricultural colleges and resulted in increased emphasis on cooperatives. Education in selling farm products and purchasing supplies was considered a part of the county agents' duties. The agents assisted in organizing many cooperatives. As more vocational agriculture departments became established, due to the legislative initiative of the Smith-Hughes Act of 1917, instructors of vocational agriculture were also considered a resource and assisted in educating of the cooperative business enterprise (Abrahamsen, 1976).

Ingraham (1980) spoke to the educational emphasis on youth and agricultural youth educators by cooperatives as he expressed that,

> A responsibility facing vocational agriculture teachers and county agents today is to teach young people not only about the production side of agriculture, or on the farm agriculture, but also how to effectively employ the off-farm investments that their grandparents, parents and they have made in agricultural cooperatives.

Not only has the void of cooperative education been recognized in the production segment of agriculture, as research indicates that cooperative employees are not as motivated by the cooperative philosophy and purpose as they once were (Steiger, 1983). Steiger further stated that "We (cooperatives) must be more conscious of hiring employees at all levels who are committed to the cooperative philosophy." Thus, inclusion of the cooperative method of business in the vocational agriculture curriculum is doubly important. Cooperatives are not only critical to production agriculture but also serve as employers of vocational agriculture graduates.

The void in cooperative education in the vocational agriculture curricula may best be attributed to the lack of adequate teaching materials. Often cooperatives are not even discussed in high school texts and many teachers have no background in cooperatives (Kirkpatrick, 1979).

Need for Instructional Materials

Instructors of vocational agriculture have often been forced to compensate for the diverse and technical nature of subject matter in the expanding and changing role of agricultural education. Instructors tend to be heavily dependent upon instructional materials to assist them in teaching subject matter outside of their areas of expertise. The utilization of these instructional aids provide learning experiences in

a more interesting and efficient manner than may otherwise have been possible (Birkenholz and Kahler, 1983).

Hemp (1980) and Blezek and Dillon (1980) have suggested that the development and implementation of a basic core curriculum could be a positive factor in rebuilding some of the weaker areas of instruction in vocational agriculture. In response to instructors' needs for instructional materials to aid in technical areas, coupled with the cooperative community's research findings regarding an educational void, the Cooperatives--Serving Our Community instructional unit was developed and distributed to vocational agriculture instructors throughout Nebraska.

Need for Evaluation

Although an instructional aid or unit may be developed, the effectiveness is unknown until the materials have been tried in the classroom and evaluated in terms of the desired behavioral changes in students (Ridenour, 1965). Briers (1978), Townsend (1981), Birkenholz (1982) and Hosseini (1982) all advocated evaluation of instructional materials to determine their teaching-learning value. These findings substantiated those of Dillashaw and Butts (1978) who concluded that utilization of instructional materials is effective (for evaluation purposes) only if it leads to learning--a change in behavior. The need for evaluation of a curriculum and its documentation is necessary to determine if instructional materials lead to desired behavioral changes in students (Townsend and Carter, 1981). Therefore, the success of a new curriculum can be judged only if evaluation is made (Dillashaw and Butts, 1978).

to meet those needs. Further, the need for instructors to utilize high quality, effective instructional materials in areas of which they may have little expertise was critical to efficient and effective instruction. The Cooperatives--Serving Our Community instructional unit was developed to provide a means to fill that need.

The literature further expressed the need to evaluate instructional materials to determine if they actually create the desired behavioral changes in the students as set forth in the specific objectives of the materials. In addition, the review of literature revealed precedence for the assessment of attitudes as a means for evaluation of newly developed instructional materials. Since the inservice introduction of this instructional unit in the Fall of 1983, ample time has elapsed for instructors to integrate the materials into their local curriculum. Therefore, the need was obvious to evaluate the effectiveness of the Cooperatives--Serving Our Community instructional unit.

CHAPTER III

METHOD OF PROCEDURES

Restatement of the Problem

The problem of concern for this investigation was to assess the perceptions of Nebraska vocational agriculture instructors with respect to the Cooperatives--Serving Our Community instructional unit.

Objectives of the Study

It is the purpose of this study to assess the perceptions of Nebraska vocational agriculture instructors with regard to the Cooperatives--Serving Our Community instructional unit. Specific objectives are as follows:

1. To determine perceptions of the instructional unit quality as determined by selected demographic variables.

2. To determine perceptions of the instructional unit value as determined by selected demographic variables.

3. To determine perceptions of the instructional unit inservice training as determined by selected demographic variables.

4. To determine if a significant correlation exists between the perceptions of quality, value and inservice training.

Hypotheses

The following null hypotheses were developed to determine if there was a substantial difference in Nebraska vocational agriculture instructors' perceptions of the Cooperatives--Serving Our Community instructional unit.

Null Hypothesis 1

There is no significant difference between the perceptions of instructional unit quality, value or inservice training by 1983-84 Nebraska Vocational Agriculture Association districts.

Null Hypothesis 2

There is no significant difference between the perceptions of instructional unit quality, value or inservice training by years of experience as a vocational agriculture instructor.

Null Hypothesis 3

There is no significant difference between the perceptions of instructional unit quality, value or inservice training by total number of students enrolled in local vocational agriculture programs.

Null Hypothesis 4

There is no significant difference between the perceptions of instructional unit quality, value or inservice training by instructor use-rate.

Null Hypothesis 5

There is no significant difference between the perceptions of instructional unit quality, value or inservice training by participation mode at District Inservice Workshops.

Null Hypothesis 6

There is no significant correlation between the instructional unit use-rate and the perceptions of its quality, value and inservice training.

Population

During the 1985-86 school year there were 129 of the 135, 1983-84 school year, secondary vocational agriculture departments still in existence within Nebraska. This total included one department which was not in existence in 1983, when the curriculum materials were provided, and two departments which currently share the same vocational agriculture instructor. Therefore, the population for this study is restricted to the instructors responsible for agribusiness instruction in 127 Nebraska secondary vocational agriculture departments during the 1985-86 school year. The population was identified through the use of the Agriculture Teachers Directory (Henry, 1983) listing of Nebraska vocational agriculture departments, addresses, teachers and schools.

Selection of the Sample

The sample of Nebraska vocational agriculture instructors for this study included the 127 vocational agriculture instructors defined in the "Population" section.

Dependent Variables

The dependent variables of this study were the perceptions of Nebraska vocational agriculture instructors with respect to the treatment instrument, the Cooperatives--Serving Our Community instructional unit. Specific perceptions measured were those dealing with quality, value and inservice training.

Independent Variables

To further study the characteristics of the instructors, certain independent, demographic information was collected. These variables

included 1983-84 Nebraska Vocational Agriculture Association districts, years of experience as a vocational agriculture instructor, total number of students enrolled in the local vocational agriculture programs, instructional unit use-rate and participation mode at the District Inservice Workshops.

Treatment Instrument

The Cooperatives--Serving Our Community instructional unit is a standardized unit designed to be utilized as a curriculum supplement to aid in understanding the business methods employed in America. Emphasis is placed on the cooperative method of business. The purpose of the instructional unit is to provide an alternative to the traditional teaching methods, or complete lack of instruction, regarding the cooperative business method. Utilization of the instructional unit will provide a resource to instructors in order to increase student knowledge of the benefits and challenges of the cooperative business system. Introductory information, proposed usage and the content of the Cooperatives--Serving Our Community instructional unit have been included in Appendix B.

Instrumentation

The purpose of the instrumentation was to measure the perceptions of Nebraska vocational agriculture instructors with respect to the instructional unit, Cooperatives--Serving Our Community. However, like Superka et al. (1977), a search for appropriate instruments measuring cognitive and effective variables proved unsuccessful. Yet, Dillon (1981) had designed an instrument to assess attitudes of vocational

agriculture instructors toward the Nebraska Vocational Agriculture Core Curriculum. Additionally, Birkenholz and Kahler (1983) had included an evaluation of vocational agriculture instructors' "feelings" toward the Agriculture/Agribusiness Management Instructional Unit in their study. The instrumentation of both studies was utilized in the design of the present instrument.

Design of the Instrument

The instrument utilized for data collection was a mailed questionnaire. The initial draft of the survey instrument was designed by the researcher, by review of literature, and through consultation with Dr. Allen G. Blezek, professor of Agricultural Education in the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln.

A panel of experts was selected to form a jury. Panel members included: Dr. Allen G. Blezek, Dr. Roy D. Dillon and Dr. Richard M. Foster, teacher educators, Department of Agricultural Education, and Dr. Mike Turner, Department of Agricultural Economics in the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln. The jury made recommendations to be included in the revised survey instrument and validated its usage.

The revised survey instrument (Appendix C) consisted of a modified Likert-type scale which included a five-point continuum as follows:

1 = To no extent

2 = To small extent

3 = To moderate extent

4 = To significant extent

5 = To great extent

Respondents were asked to choose the scale value which most closely represented their attitudes relative to each of the dependent variables researched. The first ten questions contained descriptive personal and situational data regarding the respondents. The objectives of the questions were:

1. To identify the respondents by Nebraska Vocational Agriculture Association districts (survey instrument, code at top left hand corner).

2. To identify the years of experience as a vocational agriculture instructor of respondents (survey instrument, Question 1).

3. To identify the number of students enrolled in vocational agriculture at respondent's school (survey instrument, Question 2).

4. To identify the use-rate of the instructional unit by respondents (survey instrument, Question 6).

5. To determine participation mode at District Inservice Workshops (survey instrument, Questions 9 and 10).

6. To determine perception of the instructional unit quality (survey instrument, Questions 11, 12, 13 and 14).

7. To determine perception of the instructional unit value (survey instrument, Questions 15, 16, 17, 18, 19 and 20).

8. To determine perception of the District Inservice Training for the instructional unit (survey instrument, Questions 21, 22 and 23).

9. Questions 3, 4, 5, 7, 8, 24 and 25 were asked in reference to use-rate data requested by the Nebraska Cooperative Council. (This data was collected but not reported in the present study.)

10. Additionally, space was provided throughout the questionnaire for respondents' comments. A summary of respondents' comments may be found in Appendix D.

Data Collection

Data were collected via a mailed questionnaire to 127 Nebraska secondary vocational agriculture departments. A brief letter of explanation and instruction accompanied the questionnaire (see Appendix E). The vocational agriculture instructors were instructed to complete the questionnaire to the best of their ability and return it in a postage-paid, self-addressed envelope. If the questionnaire was mailed to a multi-teacher department, a phone call was placed to that department to inquire as to which instructor had the responsibility for agribusiness instruction. The questionnaire was provided to those instructors who had such responsibilities.

Responses from 113 of the 127 instructors were received. Upon receipt and evaluation of the data, five questionnaires were not utilized as they contained insufficient or incomplete data. Therefore, data from 108 (85 percent) questionnaires were utilized.

Summary of Procedures

The following activities were accomplished in proceeding through the study:

1. A letter of explanation, questionnaire and postage-paid return envelope was sent to each Nebraska vocational agriculture instructor identified as having responsibility for agribusiness instruction (see Appendix F).

2. The completed survey instrument provided the data for the study.

3. A reminder letter and questionnaire were sent to those instructors who had not responded within one week of the initial mailing.

4. Individual phone calls were placed to all instructors who had not responded to the reminder letter and survey within two weeks of the original mailing.

5. Results were tabulated with assistance from the Nebraska Education and Research (NEAR) Center Consulting Service of the University of Nebraska-Lincoln.

Analysis of Data

The data were obtained from the completed mailed survey instrument returned by the vocational agriculture instructors. This information was entered on "WordStar" word processing software, transferred to and then processed by electronic computer services at the University of Nebraska-Lincoln. Analysis was performed using the Statistical Package for the Social Sciences (SPSSx Release 2) by the Nebraska Education and Research Center.

Analysis for this study consisted of determining frequencies, means and standard deviations on all appropriate data. The multivariate and one-way analysis of variance (MONOVA and ANOVA, respectively) were used to determine if group means of independent variables were significantly different from the dependent variables. An alpha level of .05 was used. When more than two groups were compared, the Tukey-HSD procedure was used to determine which subgroup means differed significantly from each

other. In addition, the Pearson Product-Moment Correlation Coefficients were utilized to determine relationships between variables.

After coding each instructor's responses, a mean response score was computed for each dependent variable. Due to significant correlations between dependent variables, data analyses were implemented utilizing the mean responses for each dependent variable rather than individual subscale responses.

Reliability estimates were computed for each dependent variable response as well as for the overall responses. The Cronbach Alpha Reliability Coefficients were computed using the SPSS subprogram "Reliability" to determine internal consistency.

Overall reliability was determined to be .8579. Reliability for the responses to perceptions of instructional unit quality was .6945, whereas it was .7909 for perceptions of instructional unit value and .6292 for perceptions of inservice training. Although reliability coefficients for perceptions of instructional unit value and inservice training appeared to be slightly low, research consultants at the Nebraska Education and Research Center advised continuing analysis as they were certainly acceptable.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Background to Study

The purpose of this investigation was to assess the perceptions of Nebraska vocational agriculture instructors with respect to the Cooperatives--Serving Our Community instructional unit. Information for this investigation was secured from 108 Nebraska vocational agriculture instructors.

The data discussed in this chapter were collected through use of a survey instrument submitted in questionnaire form to Nebraska secondary vocational agriculture instructors who were employed during the 1985-86 school year. Usable questionnaires were returned from 85 percent of all surveyed. The findings of the study are summarized in Tables 1 through 13.

Specific Objectives

1. To determine the relationship between perceptions of instructional unit quality, value and inservice training by 1983-84 Nebraska Vocational Agriculture Association districts.

2. To determine the relationship between perceptions of instructional unit quality, value and inservice training by years of experience as a vocational agriculture instructor.

3. To determine the relationship between perceptions of instructional unit quality, value and inservice training by total number of students enrolled in local vocational agriculture programs.

4. To determine the relationship between perceptions of instructional unit quality, value and inservice training by instructor use-rate.

5. To determine the relationship between perceptions of instructional unit quality, value and inservice training by the participation mode at District Inservice Workshops.

6. To determine the correlation between the instructional unit use-rate and the perception of its quality, value and inservice training.

General Information

To accomplish the objectives of the investigation, certain control variables were added which provided demographic information on the vocational agriculture instructors themselves. This information included: 1983-84 Nebraska Vocational Agriculture Association district, years of experience as a vocational agriculture instructor, total number of students enrolled in local vocational agriculture programs, instructional unit use-rate and participation mode at District Inservice Workshops. This information is summarized in Tables 1 through 5.

Nebraska Vocational Agriculture Association Districts

Table 1 is representative of the distribution of respondents by 1983-84 Nebraska Vocational Agriculture Association district (NVAA). Of the 108 respondents 15 (13.9 percent) represented NVAA District I; 12 (11.1 percent) represented NVAA District II; 14 (13.0 percent) represented NVAA District III; 17 (14.8 percent) represented NVAA District IV; 16 (14.8 percent) represented NVAA District V; 14 (13.0 percent)

represented NVAA District VI; 9 (8.3 percent) represented NVAA District VII; and 11 (10.2 percent) represented NVAA District VIII. NVAA District II had the highest return rate of 92.3 percent while District VI had the lowest return rate of 70.0 percent. Interestingly, the first five of the eight districts had return rates of over 87 percent.

TABLE 1

Respondents by 1983-84 NVAA District

NVAA District	Possible Respondents	Response		
		Frequency	Percent of Total	Percent by District
I	17	15	13.9	88.2
II	13	12	11.1	92.3
III	15	14	13.0	87.5
IV	19	17	15.7	89.5
V	18	16	14.8	88.9
VI	20	14	13.0	70.0
VII	11	9	8.3	81.8
VIII	14	11	10.2	78.6
Total	127	108	100.0	85.0

Years of Experience

Table 2 depicts the frequency of respondents by years experience as a Nebraska vocational agriculture instructor. Broderick (1984) indicated that "An experienced teacher may be in a better position to discriminate between educational fads and educational trends." Hence the question of classroom longevity was asked as a possible method of validating the data. In addition, it was important to identify teachers with less than two years of experience as a Nebraska vocational agriculture instructor as they did not have the opportunity to attend the 1983

Fall District Inservice Workshops. Due to contrasts in years of experience, the study was primarily concerned with groupings by years of experience rather than specifying each instructor's tenure. For purpose of analysis, categories were assigned to identify the groupings in the following manner:

Category		Years of Experience
1	=	1-2 years
2	=	3-5 years
3	=	6-10 years
4	=	11-15 years
5	=	16 or more years

TABLE 2

Respondents by Years Experience

Years Experience	Response	
	Frequency	Percent
1-2	11	10.2
3-5	26	24.1
6-10	39	36.1
11-15	13	12.0
16 or more	19	17.6
Total	108	100.0

Note: mean = 3.028; standard deviation = 1.219.

It was observed that 65 (60.2 percent) of the 108 respondents had 3 to 10 years experience as Nebraska vocational agriculture instructors. Latest reports on tenure indicate a mean of 9.9 years (Foster, 1986). This study substantiated these findings as the mode was 6 to 10 years of

experience (39 respondents) which accounted for over one-third of the total respondents (36.1 percent). Comparatively, 11 respondents (10.2 percent) had one to two years experience, 13 respondents (12 percent) had 11 to 15 years experience and 19 respondents (17.6 percent) had 16 or more years of experience as vocational agriculture instructors.

Local Vocational Agriculture Program Enrollment

Table 3 reveals the distribution of the total number of students enrolled in local vocational agriculture programs. Due to the contrasts in enrollment between programs, this study was primarily interested in applying limitations in order to define groupings by local enrollments. For purpose of analysis, categories were assigned to identify the groupings in the following manner:

Category		Local Enrollment
1	=	15 or less
2	=	16-30
3	=	31-45
4	=	46-60
5	=	61 or more

Accordingly, frequency of groupings included three respondents (2.8 percent) who taught in departments with an enrollment of 15 or less students, 32 respondents (29.6 percent) reported an enrollment of 16 to 30 students and the mode, or 48 respondents (44.4 percent), reported an enrollment of 31 to 45 students.

In comparison, 19 respondents (17.6 percent) had an enrollment of 46 to 60 students and only six respondents (5.6 percent) had an enrollment of 61 or more students. The mean response was 2.94, indicating

that the mean number of students enrolled would be near the top end of the 16 to 30 enrollment category. Also worthy to note, 79 instructors, nearly three-fourths of total respondents (73.8 percent), had enrollments between 16 to 45 students inclusive.

TABLE 3

Respondents by Local Vocational Agriculture Program Enrollment

Enrollment	Response	
	Frequency	Percent
15 or less	3	2.8
16-30	32	29.6
31-45	48	44.4
46-60	19	17.6
61 or more	6	5.6
Total	108	100.0

Note: mean = 2.935; standard deviation = .899.

Instructional Unit Use-Rate

The instructional unit was designed to be flexible and included suggested plans for implementation on a one-, two- or three-week basis dependent upon local needs.

Due to possible contrasts in use-rate between local departments, the study was primarily concerned with groupings of use-rates rather than the specific time each instructor allocated to use of the instructional unit. For purposes of analysis, instructors were asked to indicate which of the following categories best described the hours of use allocated the instructional unit.

Category		Use-Rate
1	=	0 hours
2	=	1-5 hours
3	=	6-10 hours
4	=	11-15 hours
5	=	16 or more hours

Table 4 reveals that the mode response, or 47 respondents (43.9 percent), indicated instructional unit utilization of one to five hours in their local vocational agriculture program. Of the 108 responses, 18 respondents (16.8 percent) did not utilize the instructional unit at all. Nearly one-fourth of the respondents (24.3 percent) indicated that they utilized the instructional unit 6 to 10 hours and nearly a tenth of the respondents (9.3 percent) indicated use of the instructional unit for 11 to 15 hours in the local vocational agriculture curriculum. The

TABLE 4

Respondents by Instructional Unit Use-Rate

Hours Used	Response	
	Frequency	Percent
None	18	16.7
1-5	48	44.4
6-10	26	24.1
11-15	10	9.3
16 or more	6	5.6
Total	108	100.0

Note: mean = 2.426; standard deviation = 1.052.

mean response of 2.43 indicates that the mean usage of the instructional unit lies in that same one to five hour category.

Participation Mode at District Inservice Workshops

Table 5 reflects respondents' perceptions with respect to attendance at the 1983 Fall District Inservice Workshop regarding use of the instructional unit. Sixty-five respondents (60.7 percent) indicated that they had attended while 42 respondents (39.3 percent) indicated they did not attend the District Inservice Workshop.

Comparatively, 57 respondents (64 percent) indicated that cooperative representatives from their local area were in attendance whereas 32 respondents (36 percent) indicated that local cooperative representatives had not attended. Incomplete data was received from 19 instructors who did not respond to this question.

Attendance data from the District Inservice Workshops (refer to Appendix A) indicated that in the Fall of 1983, 78 percent of the vocational agriculture departments represented were accompanied by local cooperative representatives. Also worth noting, over 90 percent of all vocational agriculture instructors were in attendance at the eight District Inservice Workshops. These differences from reported perceptions may be accounted for by instructor turnover, retirements and deaths. In addition, confusion may have arisen regarding definition of local cooperative trade territory versus school board districts and nearly two and one-half years had lapsed since the Fall of 1983 District Inservice Workshops. The design of this study dealt with perceptions of the vocational agriculture instructors; therefore, the attendance data they returned was utilized in this investigation.

TABLE 5

Respondents by Participation Mode at District Inservice Workshops

Participation Mode	Yes		No	
	Frequency	Percent	Frequency	Percent
Instructors	73	67.6	35	32.4
Instructors attending with cooperative representatives (a)	57	64.0	32	36.0

(a) Incomplete data received on 19 responses.

Perceptions of Instructional Unit Quality, Value and Inservice Training

Table 6 reveals the respondents' perceptions of instructional unit quality, value and inservice training. As reported in the "Design of the Instrument" section, there were predetermined questions identified to provide data regarding respondents' perceptions of the instructional unit quality, value and inservice training.

Each question provided five response categories. These categories were patterned on a continuum basis with similarities to a Likert scale. They were:

Category		Perception
1	=	To no extent
2	=	To small extent
3	=	To moderate extent
4	=	To significant extent
5	=	To great extent

Although the number of responses for each question varied, due to listwise deletion the researcher obtained 78 valid observations from respondents who had answered every question.

The characteristics, or quality of the instructional unit, were measured by Questions 11 through 14 and resulted in a mean score of 3.12. The merit, or value of the instructional unit, was measured by six questions, specifically 15 through 20. The instructional unit inservice training was measured by Questions 21 through 23. Respondents' perceptions of value resulted in the highest mean score of 3.47. Perceptions of inservice training resulted in a mean score of 3.18 for the three questions 21 through 23. Interestingly, the mean responses all related to the "to moderate extent" category.

TABLE 6

Mean Scores Representing Respondents' Perceptions of Instructional Unit Quality, Value and Inservice Training

Variables	Question Numbers	Mean	Standard Deviation	Minimum Response	Maximum Response	Valid N
Quality	11-14	3.12	0.55	1.75	4.25	94
Value	15-20	3.47	0.49	2.17	4.50	97
Inservice	21-23	3.18	0.66	1.67	4.67	80

Note: Seventy-eight valid observations resulted from listwise deletion. Perception measured on a 5-point scale; responses ranged from 1 = no extent through 5 = great extent.

Findings for Null Hypothesis

Since the null hypothesis was used as a statistical frame of reference in the study, the results will consist of interpretations in terms of the null hypothesis.

Null Hypothesis 1

Table 7 summarizes the findings for Null Hypothesis 1, which was: There is no significant difference between the perceptions of instructional unit quality, value or inservice training by 1983-84 Nebraska Vocational Agriculture Association districts. Districts V and VI shared the highest number of responses with 13 each, while District VIII had the least at six respondents. The pooled within-cell correlation matrix showed that all values were between .2 and .8. Accordingly, the Wilks Multivariate Test of Significance was initiated to test for significant difference in mean score for instructional unit quality, value and inservice training between Nebraska Vocational Agriculture Association districts (NVAA).

In regard to quality, Districts VII, III, II and V reported individual mean scores appearing to be above the entire sample mean score of 3.15. District I reported the lowest mean score of 2.91, which was in the "to small extent" category, for perceptions of instructional unit quality.

In regard to value, it is noted that an overall mean score of 3.51 was reported, the highest of the three variables. Districts I, II, VI and VII reported mean scores appearing to be above the sample mean score for value of 3.51. District VII reported the highest mean score for value with 3.81, while District VIII reported the low of 3.19.

TABLE 7

Analysis of Mean Scores Representing Respondents' Perceptions of Instructional Unit Quality, Value and Inservice Training by NVAA District

Perceptions of	NVAA District I n=11	II n=8	III n=8	IV n=12	V n=13	VI n=13	VII n=7	VIII n=6	Totals N=78	Univariate F's* Value Probability
Quality										
M	2.91	3.25	3.34	3.04	3.17	3.15	3.46	3.00	3.15	F(7,70)=1.02
SD	0.73	0.44	0.42	0.51	0.43	0.62	0.39	0.47	.48	p = 0.425
Value										
M	3.56	3.63	3.50	3.46	3.38	3.55	3.81	3.19	3.51	F(7,70)=0.988
SD	0.37	0.68	0.65	0.48	0.37	0.46	0.39	0.48	.50	p = 0.447
Inservice										
M	3.15	3.17	3.42	3.10	3.28	3.03	3.48	3.22	3.20	F(7,70)=0.557
SD	0.64	0.59	0.61	0.76	0.52	0.83	0.33	0.69	.64	p = 0.788

Note: Analysis only performed on valid observations resulting from listwise deletion. Perceptions measured on a 5-point scale; responses ranged from 1 = no extent through 5 = great extent.

*Multivariate F(21,196)=1.018, p = 0.443 at .05 level of significance.

With respect to perceptions of inservice training, the entire sample mean score was 3.20. District VII (M = 3.48), District III (M = 3.42), District V (M = 3.28) and District VIII (M = 3.22) all tended to have had mean scores for perceptions of inservice training above 3.20. District VI had the lowest mean score of 3.03 but also had the largest standard deviation of 0.83.

Interestingly, District VII tended to have the highest mean scores with respect to each of the three variables (quality M = 3.46; value M = 3.81; inservice training M = 3.48). In contrast, District IV reported mean scores which appeared to be below the entire sample totals for perceptions for each of the three variables. Irregardless, these differences were not significant as the Multivariate Test of Significance indicated that $p > .05$. Therefore, the researcher concluded that the data supported the null hypothesis and it was not rejected.

Null Hypothesis 2

The findings in Table 8 relate to Null Hypothesis 2, which was: There is no significant difference between the perceptions of instructional unit quality, value or inservice training by years of experience as a vocational agriculture instructor. As in Table 2, due to contrasts in years of experience, the study was primarily concerned with groupings by years of experience rather than specifying each instructor's tenure.

Due to listwise deletion, there were only two instructors with valid observations in category 1 (one to two years experience). It had been predetermined through consultation with statisticians at the Nebraska Education and Research Center and the research advisor, Dr. Allen G. Blezek, that a cell size less than six would likely

contaminate the findings. Therefore, in analysis of this hypothesis, the two instructors' perceptions in category 1 (one to two years) were not considered. Additionally, they were not merged as they had not been an instructor during the 1983 introduction of the instructional unit and could have contaminated results in any group merger. The following grouping by years of experience were utilized:

Category		Years of Experience
2	=	3-5 years
3	=	6-10 years
4	=	11-15 years
5	=	16 or more years

This accounts for the entire sample total for N of 76. Over 40 percent (31 responses) of the valid observations were representative of category 3 (6-10 years experience).

An analysis of the pooled within-cell correlation matrix for the set of dependent variables showed all values were between .2 and .8. Accordingly, the Wilks Multivariate Test of Significance was initiated. The entire sample total mean scores for perceptions of all variables ranged from 3.17 (quality) to 3.52 (value) with all individual group mean scores found in the "to moderate extent" category. The instructors with 6 to 10 years of experience reported mean scores for perceptions for all three variables appearing to be above the entire sample means, while the other categories appeared to have had mean scores which appeared to be consistently below the entire sample total mean scores.

Irregardless, the Multivariate F probability of .728 was not significant at the .05 level. Therefore, the researcher concluded the data supported the null hypothesis. It was not rejected.

TABLE 8

Analysis of Mean Scores Representing Respondents' Perceptions of Instructional Unit Quality, Value and Inservice Training by Years Experience as a Vocational Agriculture Instructor

Perceptions of	Years Experience				Entire Sample Totals N=76	Univariate F's* Value Probability
	3-5 Years n=17	6-10 Years n=31	11-15 Years n=11	16 or More Years n=17		
Quality						
M	3.12	3.31	3.16	3.00	3.17	F(3,72)=1.44
SD	0.46	0.46	0.67	0.53	0.51	p = 0.239
Value						
M	3.39	3.64	3.53	3.42	3.52	F(3,72)=1.28
SD	0.47	0.53	0.48	0.40	0.48	p = 0.289
Inservice						
M	3.10	3.38	3.18	3.02	3.21	F(3,72)=1.35
SD	0.62	0.61	0.86	0.58	0.65	p = 0.264

Note: Analysis only performed on valid observations resulting from listwise deletion. Perceptions measured on a 5-point scale; responses ranged from 1 = no extent through 5 = great extent. Perceptions of respondents having less than 3 years experience were not included because the cell size was less than 6.

*Multivariate F(9,170)=0.678; p = 0.728 at .05 level of significance.

Null Hypothesis 3

Null Hypothesis 3 was: There is no significant difference between the perceptions of instructional unit quality, value or inservice training by total number of students enrolled in local vocational agriculture programs. Table 9 reveals the findings related to this

hypothesis. Again, due to contrasts in total enrollments, the study was primarily concerned with grouping of enrollments, rather than each vocational agriculture department's specific enrollment.

Due to listwise deletion, there were less than six valid observations in the first and fifth categories; therefore, they were merged with the second and fourth categories respectively as follows:

Category		Enrollment
1 and 2	=	30 or less students
3	=	31 to 45 students
4 and 5	=	46 or more students

The entire sample total N was 78, with 38 respondents (nearly 50 percent) reporting enrollments of 31 to 45 students in their local vocational agriculture programs.

In analysis of the pooled within-cell correlation matrix for the set of dependent variables, the researcher found that all values were between .2 and .8. Thus, the Wilks Multivariate Test of Significance was utilized.

In analysis of the mean scores, all variables revealed mean scores for perceptions above three or in the "to moderate extent" category. Again, value appeared to have the highest mean score (3.51), while quality appeared to have the lowest mean score (3.15). The merged groups of respondents, with a local enrollment of 46 or more (18 respondents), tended to have higher mean scores for perceptions above the entire sample totals for perceptions of each variable. Both extremes, respondents with enrollments of 46 or more and those with enrollments of 30 or less, tended to have higher mean scores for

perceptions of inservice training than did respondents with enrollments of 31 to 45 students.

However, the Multivariate F probability of .753 failed to offer significance at the .05 level. Accordingly, the researcher concluded that the data supported the null hypothesis and it was not rejected.

TABLE 9

Analysis of Mean Scores Representing Respondents' Perceptions of Instructional Unit Quality, Value and Inservice Training by Enrollment in Local Vocational Agriculture Programs

Perceptions of	Students Enrolled			Entire Sample Totals N=78	Univariate F's* Value Probability
	30 or Less n=22	31-45 n=38	46 or More n=18		
Quality					
M	3.11	3.13	3.24	3.15	F(2,75)=0.308
SD	0.55	0.56	0.45	0.53	p = 0.736
Value					
M	3.51	3.47	3.58	3.51	F(2,75)=0.309
SD	0.45	0.47	0.57	0.48	p = 0.735
Inservice					
M	3.27	3.09	3.35	3.20	F(2,75)=1.229
SD	0.70	0.55	0.74	0.64	p = 0.299

Note: Analysis only performed on valid observations resulting from listwise deletion. Perceptions measured on a 5-point scale; responses ranged from 1 = no extent through 5 = great extent. Perceptions of respondents in category 1 were merged with category 2 and category 5 was merged into category 4 because the cell sizes were less than 6.

*Multivariate F(6,146)=0.571; p = 0.753 at .05 level of significance.

Null Hypothesis 4

Table 10 summarizes the findings for Null Hypothesis 4 which was: There is no significant difference between the perceptions of

instructional unit quality, value or inservice training by its use-rate. The use-rate was determined by the number of hours the instructors perceived the instructional unit Cooperatives--Serving Our Community had been used. The categories for use-rate groups were defined in Table 4.

Due to listwise deletion, there were less than six valid observations in the last category (16 or more hours); therefore, they were merged with the 11-15 hours category. The result was the formation of four categories as follows:

Category		Use-Rate
1	=	0 hours
2	=	1-5 hours
3	=	6-10 hours
4 and 5	=	11 or more hours

Of the entire sample total (N = 78), six respondents had not utilized the instructional unit at all (0 hours).

Analysis of the pooled within-cell correlation matrix, for the set of dependent variables, revealed all values were between .2 and .8 correlation. Accordingly, the Wilks Multivariate Test of Significance was utilized. Table 10 shows that the Multivariate F probability ($p = .035$) was significant at the .05 level regarding the perceptions of respondents to instructional unit quality, value and inservice training in relationship to use-rate. The Univariate Test of Significance was then implemented to determine within which variable(s) the significance rested. Univariate F probability for instructors' perceptions of quality ($p = .008$) showed significance at the .05 level. The Tukey-HSD Post Hoc Test was used to determine significant differences between the

TABLE 10

Analysis of Mean Scores Representing Respondents' Perceptions of Instructional Unit Quality, Value and Inservice Training by Use-Rate

Perceptions of	Hours of Use				Totals N=78	Univariate F's* Value Probability
	0 Hours n=6***	1-5 Hours n=36***	6-10 Hours n=24	11 or More Hours n=12***		
Quality						
M	2.83	3.02	3.23	3.54	3.15	F(3,74)=4.293**
SD	0.70	0.58	0.39	0.26	0.53	p = .008**
Value						
M	3.25	3.53	3.48	3.63	3.51	F(3,74)=0.858
SD	0.36	0.47	0.52	0.50	0.48	p = .467
Inservice						
M	2.72	3.14	3.35	3.33	3.20	F(3,74)=1.864
SD	0.61	0.67	0.63	0.49	0.64	p = .143

Note: Analysis only performed on valid observations resulting from listwise deletion. Perceptions were measured on a 5-point scale; 1 = no extent through 5 = great extent. Responses for 16 hours or more were merged with those of 11-15 hours, as the cell size was less than 6.

*Multivariate F's; F(9,175)=2.064; p = .035**

**p < .05

***Use-rate groups comparisons significantly different based on Tukey-HSD procedure for difference between groups; alpha = .05.

groups for perceptions of instructional unit quality. This test found significance between the category of respondents who utilized the instructional unit 11 or more hours, and categories utilizing the instructional unit zero hours and one to five hours respectively.

In review of the data, the researcher rejected the null hypothesis for instructors' perceptions of instructional unit quality and its relationship to use-rate.

Null Hypothesis 5

The findings in Table 11 relate to Null Hypothesis 5 which was: There is no significant difference between the perceptions of instructional unit quality, value or inservice training by participation mode at District Inservice Workshops. The participation mode was determined by respondents' perceptions of their attendance and attendance of local cooperative representatives at District Inservice Workshops.

The mid portion of Table 11 relates to the question: "Did you participate in the Fall 1983 District Inservice Training regarding use of the Cooperatives--Serving Our Community instructional unit?" The right side of the table relates to the question: "Did a representative from a cooperative in your local vicinity attend the Fall 1983 District Inservice Training regarding use of the Cooperatives--Serving Our Community instructional unit?" Valid observations were recorded when either a "yes" or "no" response was indicated. Due to listwise deletion, the entire sample total N was 78 for the respondents column and for their perceptions of a local cooperative representative's attendance.

Analysis of the pooled within-cell correlation matrix, for the set of dependent variables, revealed all values were between .2 and .8 correlation. Accordingly, the Wilks Multivariate Test of Significance was implemented.

TABLE 11

Analysis of Mean Scores Representing Respondents' Perceptions of Instructional Unit Quality, Value and Inservice Training by Participation Mode in District Inservice Workshops

Perceptions of	Instructor Participation			Cooperative Representation		
	Yes n=65	No n=13	Totals N=78	Yes n=57	No n=21	Totals N=78
Quality						
M	3.18	2.98	3.15	3.23	3.17	3.22
SD	0.52	0.58	0.53	0.47	0.58	0.48
Value						
M	3.57	3.21	3.51	3.60	3.42	3.56
SD	0.47	0.44	0.48	0.50	0.37	0.47
Inservice						
M	3.26	2.92	3.20	3.38	2.90	3.26
SD	0.64	0.58	0.64	0.59	0.65	0.64

Note: Analysis only performed on valid observations resulting from listwise deletion. Perceptions measured on a 5-point scale; responses ranged from 1 = no extent through 5 = great extent.

Table 11 reveals that when respondents participated and/or local cooperative representatives were in attendance, respondents' mean scores for perceptions of instructional unit quality, value or inservice training tended to be higher than the entire sample total mean scores and the non-attendee's mean scores. Respondents' mean scores for perceptions of value tend to have remained higher than those for